DOCUMENT RESUME

ED 418 984 TM 028 263

AUTHOR	Kaufman, Phillip
TITLE	Linking Student Data to SASS: Why, When, How. Working Paper Series.
INSTITUTION	MPR Associates, Berkeley, CA.
SPONS AGENCY	National Center for Education Statistics (ED), Washington, DC.
REPORT NO	NCES-WP-96-23
PUB DATE	1996-10-00
NOTE	26p.
AVAILABLE FROM	U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, 555 New Jersey Avenue, N.W., Room 400, Washington, DC 20208-5652.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Cost Effectiveness; Data Analysis; *Data Collection; Databases; Elementary Secondary Education; *Longitudinal Studies; *National Surveys; *Research Methodology; *Student Characteristics
IDENTIFIERS	*Linkage; National Assessment of Educational Progress; National Education Longitudinal Study 1988; *Schools and Staffing Survey (NCES)

ABSTRACT

This paper considers the feasibility of linking a student data sample with the Schools and Staffing Survey (SASS) teacher and administrative data. The National Center for Education Statistics (NCES) has from time to time considered linking their student-based elementary and secondary surveys to the school- and teacher-based surveys. Speculation on the feasibility of linking datasets is of particular importance in the current climate of budgetary constraints and distrust of federal data collection. The rationale for linking a student data collection in SASS is discussed, and some options for collecting these data are explored, whether linking the National Assessment of Educational Progress to the SASS or linking a new National Education Longitudinal Study with SASS. The argument for attaching a longitudinal component to the SASS response rests on several premises. Doing this could measure the types of student data deemed most worthwhile, while satisfying the two criteria for sensible merger: producing some cost benefit and engendering an analytical payoff. Of the various options available, merging a new National Education Longitudinal Study and the SASS provides the most benefit to the whole educational policy community. (Contains six references.) (SLD)

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ED 418 984

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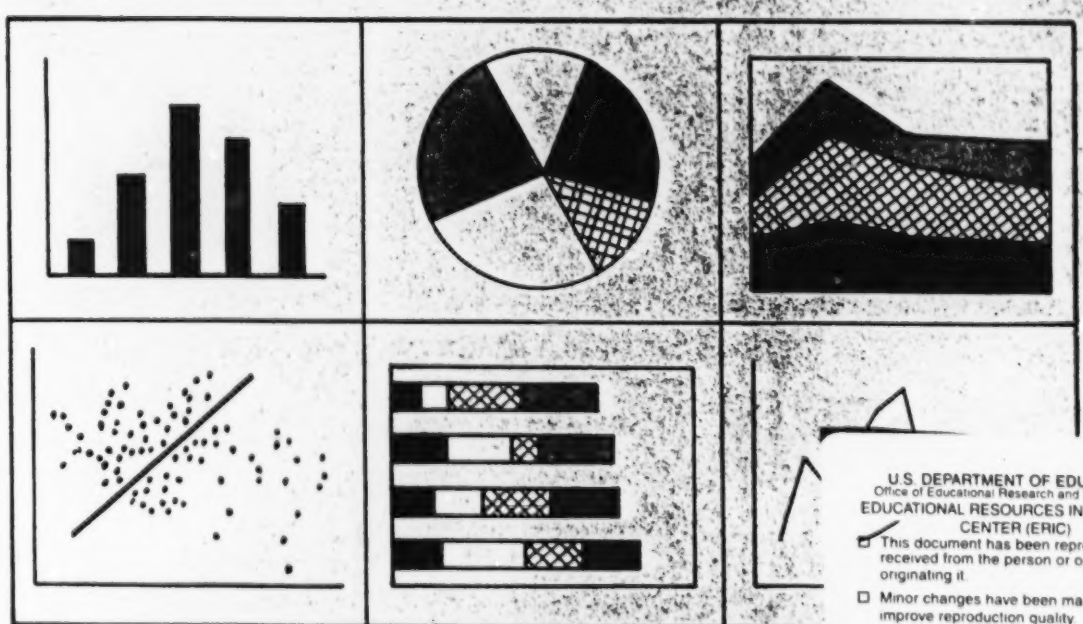
Working Paper Series

Linking Student Data to SASS: Why, When, How

Working Paper No. 96-23 October 1996



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Linking Student Data to SASS: Why, When, How

Working Paper No. 96-23 October 1996

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Suggested Citation

U.S. Department of Education. National Center for Education Statistics. *Linking Student Data to SASS: Why, When, How*. Working Paper No. 96-23, by Phillip Kaufman. Project Officer, Daniel Kaspryzk. Washington, D.C.: 1996.

October 1996

Foreword

Each year a large number of written documents are generated by NCES staff and individuals commissioned by NCES which provide preliminary analyses of survey results and address technical, methodological, and evaluation issues. Even though they are not formally published, these documents reflect a tremendous amount of unique expertise, knowledge, and experience.

The ***Working Paper Series*** was created in order to preserve the information contained in these documents and to promote the sharing of valuable work experience and knowledge. However, these documents were prepared under different formats and did not undergo vigorous NCES publication review and editing prior to their inclusion in the series. Consequently, we encourage users of the series to consult the individual authors for citations.

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Linking Student Data to SASS: Why, When, How

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October 1996

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LINKING STUDENT DATA TO SASS: WHY, WHEN, HOW

Phillip Kaufman, MPR Associates, Inc.

This paper considers the feasibility of linking a student data sample with the SASS teacher and administrative data. NCES has from time to time considered linking their student-based elementary and secondary surveys to the school- and teacher-based surveys. These thoughts have usually been centered on the analytical power that such a student/teacher data set would hold. Budgetary concerns—in terms of both fiscal program budgets and burden budgets—have also been important, but the analytical justification of linking student data to teacher data has generally taken precedence. However, speculation on the feasibility of linking datasets is of particular importance now in the current climate of budgetary constraints and distrust of federal data collection among segments of the public.

NCES (and indeed all of the governmental statistics community) is entering an era when hard choices need to be made concerning data collection and reporting. In an era when we face increasing demands for more and better data from a wide variety of educational policymakers and researchers, we are also being asked to do more with fewer resources in terms of both program money and personnel. Thus it may no longer be feasible to collect data on schools, teachers, and programs through the Common Core of Data and the Schools and Staffing Survey, conduct another National Assessment, continue to track the early childhood cohort of students (in ECLS), and launch a new longitudinal study of high school students. If it is not feasible to collect all of these data as they have been collected in the past (regardless of their analytical merit), it seems to me that ways must be found to collect all of these data with new methods or systems. Unless we think hard about these issues, opportunities may be lost and we will create gaps in our knowledge about American schools and the impact of the last few decades of reform. Old ways of conducting the business of data collection may have to be modified in light of the increased budgetary constraints imposed by Congress and the President and the simultaneous increase in analytical demands of the public.

Some Ground Rules

In this paper I discuss the rationale for linking a student data collection in SASS and then explore several options for collecting these data. However, before launching into the main body of the paper, I would like to lay out a few principles to organize my discussion of these issues. These guidelines have to do with (1) what dimensions of student data should be collected, and (2) what criteria should be used to judge the merit of the proposed new data collection system.

Dimensions of student data. As I will try and develop further in this paper, it seems to me that at least three aspects of students are important to track and should be a part of any system of student data. While perhaps not necessary elements of a SASS student component,

these elements should be (and are) part of the overall data strategy for NCES and should be considered when thinking about what kind of student data should be attached to SASS. These elements are: overall academic performance, growth in achievement, and successful transition into and through the increasing demands of schooling and work.

Among these three, measuring overall academic achievement is perhaps most important (for why else can we justify public and private investment in schools) and has traditionally had the most attention. Both NAEP and the longitudinal studies have made estimates of overall achievement levels of various groups of students over time. Accurately measuring growth in achievement (especially in observational/survey data) is perhaps the most challenging. This has been done by analysts using both HS&B and NELS:88. Examining critical transitions has historically received the least attention, but has come under increasing scrutiny as the educational community has realized the importance of studying the life-course and its impact on education (Pallas, 1993, p. 20). It seems to me that three main transition periods are important to keep in mind while considering student data within SASS: 1) the passage from middle school to high school, 2) the path through high school to graduation, and 3) the transition from graduation to school or work.

Evaluative criteria. While keeping these three elements of student data in mind, I need to set up a few criteria to judge the worthiness of any proposal to linking individual data with SASS. It seems to me that for such a merger to make sense, it must pass at least one of two tests. First, it must make sense in terms of efficiencies of administration or respondent burden. That is, it must prove to save budgetary resources (either program budget or burden budget). Secondly, it should make analytical sense. That is, the merger should result in a data system that allows more comprehensive and sensible inferences to be drawn.

To summarize, I start this discussion considering three main elements of student data and two principles of an adequate argument for linking student data within SASS:

Elements of a student data system:

- overall academic performance,
- growth in achievement,
- and successful transition through the increasing demands of schooling and work.

Criteria for judging the adequacy of including a student component in SASS:

- The merger should produce some cost benefit, and
- The merger should engender an analytical payoff.

All of the above must also be considered in the context of the mission of NCES (as I paraphrase it): 1) providing to the public accurate information on the "Condition of Education," 2) producing policy-relevant but policy-neutral research reports on current and/or enduring issues in educational policy, and 3) providing databases that other analysts

can use as research tools in their own policy work. The data needs differ for these three functions—ranging from fairly descriptive data for function 1 to data for function 3 with the potential for multivariate analysis and "cautious causal" analysis.

Why Collect Individual Student Data through SASS?

Much of the data that NCES collects are not on individual students, but are on characteristics of schools and other educational institutions. For example, SASS now collects data on school districts, schools, principals, and individual teachers. Detailed information is available on characteristics of the curriculum, qualifications of teachers, school and district level policies and practices. Traditionally, what student data have existed in SASS were generally aggregated to the school level before being captured. For example, percent of students receiving free lunch, percent of students of various racial-ethnic groups, etc., have been attached to the school files since the first cycle of SASS.

However, while it is important to be able to accurately measure and track schools, teachers, and curriculum practices, these data provide the context for measuring the main component of education—student achievement, growth, and progress. As the nation tries to assess and track the implementation of school reform, the data on schools and teachers do provide valuable indicators of the extent of reform—and these data have been used effectively over the last decade for this purpose. However, these data are much more policy relevant when used in the context of seeing how they are related to individual student achievement, growth, and experiences.

It is possible to attach to SASS additional aggregate measures of student characteristics and outcomes. In fact, this is the approach advocated by Don McLaughlin in his response to an earlier version of this paper. McLaughlin makes the case for aggregate data based on the tremendous improvements in the assessment practices of many state departments of education. He advocates using these state assessment data (presumably available for each school in SASS) by linking them to the state NAEP assessment. Dave Thissen has conducted such equating for the North Carolina state assessment.

I appreciate McLaughlin's contribution to this discussion and his comments on using state assessments are well reasoned. However, as he acknowledges, cross-sectional data on student outcomes is less interesting than longitudinal data (and, in my opinion may not be worth the effort of collecting at all). Collecting longitudinal aggregate data on student achievement within schools is of more interest, but (again in my opinion) not as useful as collecting individual student data. That is, aggregate test scores or mean outcomes do not capture the individual variation in achievement that traditionally has been of such interest.

For example, the variance of test scores *within* schools has been used as an outcome measure in assessing the effectiveness of schools. High mean test scores may be due to the school's efforts at increasing the learning of students already achieving at a high level or may be due

to the school's successful attempts at raising the scores of students at the bottom of the ability ladder. Mean scores mask these important differences in the impact of school policies and practices. Furthermore, the transitional experiences and out-of-school experiences are so important to those educational outcomes. Therefore, while it may be worthwhile for SASS to explore the possibility of attaching aggregate and longitudinal assessment data to their regular data collection, it seems to me that still accurate estimates of the associations of teacher and school characteristics on student outcomes necessitates the linking in some way of individual students (or similar groups of students) with individual schools, teachers, or policies (or similar groups thereof).

Of course, an expansion of the current SASS student survey (based on administrative records of students of sampled teachers) could add immeasurably to the analytical power of SASS. This option would build on the current efforts to include student data in SASS. While current student samples would have to be increased to be representative of the school, it still seems reasonable that this would be the most cost effective choice. However, it is perhaps the least effective analytically. Only limited kinds of data could be collected by administrative records—race-ethnicity, sex, absences, maybe grades. Test score data that would be comparable across schools would not be available. Furthermore, while data on dropout status may be available from administrative records, we have known for a long time that these data are unreliable as indicators of student status. They may be reliable indicators of what that school thinks is the status of the student, but that student may have enrolled in another school (perhaps an alternative school) or may have taken the GED and received an alternative credential. Student data would also be cross-sectional and vulnerable to all of the weaknesses of cross-sectional data.

Thus, attaching only individual administrative student statistics to school and teacher data would miss invaluable insights that are derived from observing student outcomes and transitions in the context of student's prior experiences, aptitudes, and ability levels in school—data that can only be measured through individual student surveys. Administrative data also would fail to capture or measure the impact of the transitions that students make through different schools and classrooms to the world of work and family life. Clearly, while collecting student data through administrative records may be cost effective, they do not provide the kind of data that add as much to the analytical power of SASS—only individual student data can do this.

Over the years, NCES has relied primarily on two vehicles for collecting data on individual students—the National Assessment of Educational Progress (NAEP) and the system of longitudinal studies including the National Longitudinal Study of 1972 (NLS:72), the High School and Beyond study (HS&B), and the National Education Longitudinal Study of 1988 (NELS:88). As an integral part of these data collections, individual student data have been directly linked to data about the student's teacher, classroom, and school. NAEP and the longitudinal studies accomplish this by including school and teacher questionnaires along with student background and assessment data. Data on student outcomes can therefore be linked with data on educational context.

However, much of the school, teacher, and classroom data collected by the student-based surveys are collected in more breadth and depth in SASS, or in any case is redundant with data collected by SASS. Furthermore, SASS collects data about schools, teachers, and, most importantly, *school districts* that are not collected by NAEP or the typical longitudinal study. In a time of tight budgets (that may become even leaner) a reasonable question is why not borrow the strengths of both types of surveys and link the more detailed student data NAEP or a NELS to the richer teacher, school, and district level data in SASS? In this manner each may provide contextual data to better interpret the other and possibly reduce the overall respondent burden (although perhaps increasing the burden on those sampled)—thus fulfilling the requirement I set for myself in the introductory section of this paper. This is the topic to which I will turn next.

Linking NAEP to SASS

Advantages of a Linkage with SASS

NAEP has several distinct advantages over a NELS in such a linkage. The primary advantage is in the content detail that is provided in the assessment and the age or grade coverage available in NAEP. Due to an adaptation of matrix sampling called balanced incomplete block (BIB) spiraling, the design of NAEP allows for broad coverage of curriculum content while minimizing the burden to individual students. For example, while no student takes all test items, the 1992 NAEP mathematics assessment contained 178 items at grade 4, 205 items at grade 8, and 201 items at grade 12. This allows reliable estimates across 5 content areas in mathematics as well as 3 ability areas. (The mathematics assessment in NELS:88 in contrast, contains only 40 items and 5 proficiency levels.)

NAEP also includes a student questionnaire that solicits background information on each student. NAEP is built to obtain good estimates of proficiencies in a variety of areas for groups of students. One of the primary strengths of NAEP is its ability to track the overall achievement levels of U.S. students over decades of time. From the early 1970s NAEP has reported on the mathematics and reading achievement of elementary, middle school, and high school students. This has provided educational policymakers and the general public with an immeasurably valuable tool in monitoring the health of our educational system.

Weaknesses of a Linkage with SASS

While NAEP has some obvious strengths as a candidate for merger with SASS it also has several weaknesses. Those aspects of NAEP that do not lend themselves to a merger with SASS are analytical more than procedural. For example, the main weakness of NAEP is that it is not longitudinal. Merging a cross-sectional SASS and a cross-sectional NAEP would still result in a cross-sectional survey. While the cross-sectional design of NAEP allows for rich data for descriptive indicator work, the merged data set with its rich contextual data and assessment data would still be of little use in producing valid analysis of the association of

school policies and practices. In fact, the existence of such a dataset may actually encourage "invalid but potentially influential studies of schools effects that could seriously distort policy."[1] That is, secondary analysts (or, with due apologies to William Raspberry, a columnist looking at published NAEP reports) could make erroneous conclusions about school policy based on the real but misleading associations in the data.

Another analytical weakness of NAEP is that it does not contain good measures of student socioeconomic status[2] (and may never contain such measures). Without a measure of this kind, it is difficult to accurately describe the contribution of school process and policy variables on student outcomes. Most of these process variables are related to student socioeconomic status and/or student body socioeconomic status. Again, invalid but persuasive inferences could be drawn from these data.

However, while socioeconomic status is a prominent gap in the student background variables provided by NAEP, it is only one of several variables that one would want to collect and measure in order to make satisfactory inferences from associations found in the data between achievement levels and school characteristics and practices. These variables include, but are not limited to self-concept, attitudes toward school, and peer group attitudes and opinions.

As mentioned above, one of the major contributions of NAEP is the trend data that it provides on student achievement in the United States. This strength of NAEP however, proves to be one of the greatest arguments for *not linking it to SASS*. It seems unreasonable to expect that such a linkage could be done without some modification of the design of NAEP—either in its sampling design or its administration design. Such changes in the design of NAEP could result in changes in the estimated proficiency levels in the United States.[3] In addition, SASS is a fairly new and dynamic dataset. Again, given the importance of the NAEP time series, one would want to be very cautious in any changes to the design of SASS which would effect the design of NAEP, in either content or sampling design. Therefore, locking the design (and administration) of SASS to NAEP would make future changes in SASS very difficult. For example, currently NCES data collections poorly measure the classroom experiences of students. That is, while being able to describe educational inputs—students, teachers, schools—they do not measure educational processes well—what actually goes on inside the classroom. There would be many issues in incorporating a sample of classrooms within the design of SASS—including preserving the trend data of schools and teachers from earlier rounds of SASS. Adding the encumbrance of insuring that the trend data from NAEP is also preserved would make this task even more difficult.

Furthermore, while merging the two surveys could produce savings in total respondent burden to the educational system, it almost certainly would *increase* respondent burden for individual schools and teachers that are sampled in the merged survey system. This could result in lower response rates and threaten the data quality for both surveys. NAEP has traditionally relied on high response rates to insure the quality of the trend data. Again, in

my opinion the integrity of these data is too important to jeopardize in a SASS/NAEP merger.

The NAEP emphasizes the production of reliable estimates of national and state achievement levels. Consequently, NAEP does a good, but not perfect, job of estimating the first element of student data I outlined above—measuring overall student achievement. However, the strength of NAEP is in measuring aggregate-level measures of proficiency and not individual or school-level measures of proficiency. The capture of individual proficiencies or achievement levels has never been the main goal of NAEP. Given the complex nature of the plausible value methodology, individual or small group proficiencies are measured with a good deal of measurement error.

NAEP is also a survey that emphasizes content depth over breadth of background variables. The burden budget of NAEP goes into accurately measuring content. Student background coverage is not ignored, but certainly has less emphasis than in the longitudinal studies. The longitudinal studies, on the other hand, have had somewhat different goals. For example, while NELS:88 also aspired to provide accurate estimates of group proficiencies, it had the added burden of obtaining accurate estimates of school and individual level proficiencies and individual growth. There was also the emphasis in NELS:88 on the measurement of a variety of student educational outcomes and not just academic achievement. To control respondent burden, the academic assessment tools in NELS:88 had to be much shorter in scope and content than the NAEP assessment. NAEP puts its burden dollars in the depth of the content while NELS:88 put its burden dollars in breadth of outcomes and background information.

Furthermore, because NAEP does not measure students longitudinally, it does not do a good job of measuring (and does not attempt to measure) the other two elements of my list of student data above—growth in achievement, and successful transitions through the increasing demands of schooling and work. Longitudinal studies are needed to track these types of outcomes. For these reasons a new NELS (or some modification of NELS) may be a better candidate for merger with SASS. It is to this topic that I turn next.

Linking a New NELS with SASS

While it is important to measure and track overall achievement levels, it is also important to be able to associate differences in school policies and practices with student achievement. It is almost impossible to make valid inferences about the impact of school policies with cross-sectional data—regardless of how rich the individual data may be. Of course, making clear inferences about these kinds of associations is done best by experiments in which students are assigned to educational treatment conditions and subsequent growth in achievement is measured (Metcalf, 1995).

However, true experiments in education are difficult to conduct and maintain under the best of circumstances. Many educational researchers have therefore relied on observational survey data to make cautious inferences about policy effects on achievement gains. While these studies have many well known inherent flaws, most educational researchers and policy makers have been determined to not let the "perfect be the enemy of the good" and have conducted well thought out and executed policy studies with the longitudinal studies data systems provided by NCES (Heyns & Hilton, 1982, pp. 89-102).

Three Options to Consider

It seems to me that there are at least three options to attaching a longitudinal student component to SASS. These are outlined below.

(1) ***Attach student administrative data to SASS and return to those schools to pick up longitudinal data***. This option would be substantially more expensive than simply attaching student administrative record data to SASS since one would have to return to the SASS schools to follow up on the students sampled in the first year. SASS is currently on a 5-year cycle. Presumably one would want to go back to recapture student data on a more frequent follow-up schedule—perhaps every 2 years. Re-surveying schools every 5 years to follow up on students is perhaps too long a periodicity to make timely estimates of student outcomes. One could of course go back to the SASS schools (or sample of SASS schools) to capture just those administrative records that one needs. However, even this would increase the administrative and respondent burden of the survey system without providing much in the way of analytical payoff. Student test data would still not be available and consequently measures of growth in achievement would also not be available. In terms of measuring transitions, one would know if students were still enrolled in that school, but would know precious little else about the students transitions to other school or work. Furthermore, some portion of the students would have moved, making followup of their status difficult and expensive.

In addition, learning takes place in an interaction of school, home, and family. A student data collection based solely on school records obviously records only one aspect of this learning system. The longitudinal studies have long recognized this and have tried to measure the other aspects of the student's learning environment. Measuring only one component does not allow one to fully examine the totality of the students' learning experience and how the different components interact with one another.

(2) ***Create a new longitudinal survey and "link" several items to SASS items***. NCES could field a new NELS with either an eighth-grade or tenth-grade cohort and use identical items from SASS in its school and teacher questionnaires. Linking these data would provide some analytical payoff in terms of generalizabilty of the data provided. It would also decrease the burden to individual sampled schools, which would

presumably not have to respond to the both the SASS and NELS survey instruments. However, it would increase overall response burden and would likely increase overall administrative costs. The analytical payoff would also be somewhat weak, since the linked data to SASS would not include all of the contextual data provided by the new NELS.

(3) ***Merge a new NELS with SASS.*** NCES could field a new NELS in a sample of SASS schools. For example the 1998 SASS could become the base year of NELS:98. The overall analytical reward of such a merger could be substantial. This class of students will be on schedule to graduate in 2002, thus leading to clean comparisons among the high school classes of 1972 (NLS-72), 1982 (HS&B), and 1992 (NELS:88). The longitudinal studies have traditionally have had teacher and school data, but have *not* have had district level data to attach to student data. Furthermore, the richness of the SASS teacher and administrator data would enhance the student and parent data from NELS. Student assessment data (perhaps both cognitive and affective) could be attached to the SASS data to enable analyses of the association of outcomes data with school and district policy information. Data would also be collected with several followups and would thus be able to measure growth in outcomes. Information would also be available to track the success of students in making critical transitions through school and work—for example, transitions from middle school to high school, through high school to high school completion, and from high school completion to postsecondary education and/or the world of work.

While a new NELS attached to SASS makes sense analytically, it also makes a great deal of sense in terms of cost savings. The SASS data collector will have already contacted the schools and collected data from districts, schools, and teachers. A new NELS would only have to supplement these data with a student and parent questionnaire—the teacher and school data would be collected within the normal SASS administration. Using the 1998 SASS survey as the base year of a new NELS has been shown to indicate a substantial cost savings over a separate sample design (J. Owings, internal memo, 1995, National Center for Education Statistics).

While total response burden would presumably be decreased by a NELS/SASS merger, the burden to individual schools will almost surely increase. However, this increase in response burden would have the potential to effect the response rates of the NELS data collection effort rather than SASS. SASS should not have to pay any part of the response rate price associated with the merger.

Thus, a new NELS attached to SASS would meet the requirement that I set forth in the introduction to this paper. It would collect all three types of data that I think is important—overall achievement data, data on cognitive and affective growth, and data on critical transitions. It would also meet the two criteria for a reasonable merger—it would make sense analytically, and it would make sense economically.

However, a new NELS attached to SASS would still have to overcome several obstacles and several issues will need to be addressed in designing a new NELS. In fact, fleshing out a design for a new longitudinal study attached to SASS deserves its own design conference. However, short of this, I briefly outline two areas of concern in the next section.

The Design of the National Longitudinal Study of 1998

What age cohort should NELS:98 begin with? To track the transitions I outlined above, NELS:98 could start with either an 8th-grade cohort (to follow the transition from middle school to high school and allow trend comparisons with NELS:88), with a 10th-grade cohort (to follow the transition from high school to graduation and allow trend comparisons with HS&B and NELS:88), 12th-grade cohort (to track the transition from high school to postsecondary education or work), or some combination of the above.

Starting with another eighth-grade cohort has a lot of analytical appeal. The transition from eighth grade to high school is a significant passage. Meaningful research has been done with the NELS:88 cohort on this issue. Furthermore, data from NAEP and from NELS:88 indicate that a significant amount of cognitive and academic growth occurs during this period. Larger gains are realized, on average, between the 8th and 10th grades than between the 10th and 12th grades (Crouse & Ralph, 1996).

However, despite the intuitive appeal of starting with an 8th-grade cohort, for a variety of reasons a 10th-grade cohort may be more feasible at this time. The primary reason for this is the ease with which 10th-grade students can be followed and therefore the lower cost involved. While younger cohorts are perhaps always more desirable analytically than older cohorts, following younger cohorts is always more expensive than following older cohorts. For example, almost 90 percent of NELS:88 8th graders changed schools between the 8th and 10th grades, while less than 20 percent of NELS:88 10th graders changed schools between the 10th and 12th grades. Tracking students from the 8th to the 10th grade proved to be much more expensive than originally estimated with the NELS:88 first follow-up study.

Furthermore, while there was great analytical payoff to estimating the growth in achievement of an 8th grade in NELS:88, the complexities of the psychometrics involved in this effort were severe. Because the NELS:88 test battery was used to measure overall achievement levels and growth between the 8th and 12th grades, floor and ceiling effects were much more worrisome that in HS&B, where growth was measured between the 10th and 12th grades only. The resulting adaptive nature of the NELS:88 assessment created analytical problems with researchers not sophisticated with psychometrics. For example, measuring gains in mathematics proficiency was much more complicated than merely looking at IRT gains scores, as had been done in HS&B. Since different kids took different tests, gains had to examined in terms of gains in proficiency functioning rather than raw or IRT estimated gains. Again, this complication was due to the fact that the assessment instruments had to

have a multilevel design to guard against the floor and ceiling effects that could occur when testing spanned the 8th through 12th grades.

It is also interesting to speculate whether a 12th-grade cohort (either selected on their own or an "aged" 10th-grade cohort) could be attached to SASS in the high school years and then attached or merged in a new Beginning Postsecondary Student (BPS) survey when the year after they are scheduled to leave high school. I realize that the sampling issues here may be enormously complicated and can only speculate about the complexities of such an overlapping or multiple frame design. However, by designing the three surveys in this manner, one would have the merged power (and savings?) of a SASS, a NELS, and a BPS.

Periodicity of SASS

To parallel the structure of the HS&B and NELS:88, the new longitudinal study should be on a 2-year cycle. That is, if NCES starts with a 10th-grade sample, they would want to go back and re-interview the sampled students 2 years later when most of them will be in the 12th grade. In this manner, trend analyses could be run with the HS&B and the NELS:88 10th- to 12th-grade cohorts. Since SASS is currently on a 5-year cycle, the 2-year followup would have to be done separately from the normal SASS cycle. These independent follow-up interviews could be done either as a CATI or as in-school interviews. In-school interviews would probably be more costly, but would be more efficient if cognitive assessments were conducted during this followup. (Unless someone develops a way to efficiently do a NELS:88 comparable assessment through CATI.)

Furthermore, in many ways HS&B and NELS:88 were multiple-cross-sectional data sets. Data were collected on the same people for two years apart. What went on in between those two data points is often hard to determine. For example, detailed information on school enrollment has been difficult to obtain from HS&B and NELS:88. One knows from the various followups if sampled members were attending school at the time of the followup, but do not know much about their enrollment status in between the follow-up survey dates. One could use CATI to efficiently go back to these students more frequently than a 2-year cycle and collect such time-sensitive data. These intermediate interviews would be limited to just a few items (dropout status, pregnancy status, employment status) with fewer time dependent variables reserved for the more in-depth 2-year follow-up survey.

Summary

The argument for attaching a longitudinal component to SASS rests on several premises. First, attaching a longitudinal study to SASS seems to satisfy most of the criteria I have set out for myself. It could measure all three of the types of student data deemed most worthwhile, while also satisfying the two criteria for sensible merger—producing some cost benefit, and engendering an analytical payoff. The payoff, however, is to the overall data

collection effort of NCES and not necessarily to SASS data collection in particular. In fact, attaching a longitudinal study to SASS may have no payoff whatsoever for SASS but may indeed provide more burden to the already overworked SASS staff. Attaching aggregate longitudinal student data to SASS may be of more benefit to SASS itself—merging a new NELS and SASS provides the most benefit to NCES and indeed, to the whole educational policy community.

Conclusion

The years 1983–84 saw the release of two publications that would forever change the way that Americans looked at their elementary and secondary schools. Ernest Boyer's *High School: A Report on Secondary Education in America, 1983* focused public attention on American high schools, a "troubled institution" with a confused mission and low standards. At about the same time the U.S. Department of Education released *A Nation at Risk*, which called attention to what was termed a "rising tide of mediocrity" in American schools. Due in part to the publicity these reports engendered, a decade of educational reform took hold in the American educational system. This "reform" was actually many reforms and debate over the consequences of these reforms continues today. NCES data help frame and focus this debate.

In 1984, a cohort of students had just graduated (in 1982) from high school. Their experiences in the pre-reform era would serve as a base line to judge the impact of the coming reforms. The High School and Beyond study would record the experiences of this cohort of students. In 1984, another cohort of students was in the fourth grade. These students would feel some of the immediate consequences of these reforms. Their experiences in high school, in postsecondary education, and in the transition to the world of work were captured in the experiences of the students in the National Educational Longitudinal Study of 1988. In 1984 (the year in which *A Nation At Risk* made its first impact), yet another cohort of children were born who are right now experiencing the full impact of the reforms of the last two decades. Most of this cohort are on track to graduate from high school in 2002.

Unfortunately, current budget concerns cast doubt on whether NCES will be able to field an independent longitudinal study of this class of high school students. The cohort of students who will be included in the Early Childhood Longitudinal Study will not be graduating from high school until 2012. Missing the class of 2002 will result in a data gap of almost 20 years and will weaken our ability to measure the impact of the changes introduced into our elementary and secondary schools. Failing to capture the experiences of the high school class born at the very beginning of reform will be a serious gap in the nation's knowledge about education. Linking a new longitudinal study with SASS may be the only way of effectively filling this data gap.

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Endnotes

1. This quote is attributed to Dan Koretz (and similar sentiments attributed to Richard Murnane and Marshall Smith) in L. Burstein and P. Aschbacher (1987).

2. A weak measure of SES has been used in several analyses using the NAEP data. See C. Arnold and P. Kaufman for an example.

3. This happened in the mid-1980s with the NAEP reading assessment, resulting in the so called "reading anomaly."

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94-03 (July)	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04 (July)	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05 (July)	Cost-of-Education Differentials Across the States	William Fowler
94-06 (July)	Six Papers on Teachers from the 1990-91 Schools and Staffing Survey and Other Related Surveys	Dan Kasprzyk
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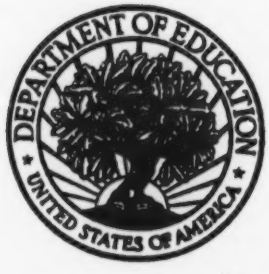
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